

Time/Dose Effects in Acute Radiation Syndrome - Acute Clinical Effects of Single-Dose Exposure of Whole-Body Irradiation

Symptoms/Signs for Dose Range 30.0 to 45.0 Gy in Free Air

Symptoms/Signs	Hours						Days							Weeks						
	4	8	12	16	20	24	2	3	4	5	6	7	2	3	4	5	6	7		
Nausea														100%						
Vomiting (retching)														100%						
Anorexia														100%						
Diarrhea (cramps)														100%						
Fatigue														100%						
Weakness														100%						
Hypotension														100%						
Dizziness														100%						
Disorientation														100%						
Bleeding																				
Fever							50-90% (a)													
Infection														(b)						
Ulceration																				
Fluid loss/electrolyte imbalance														100%						
Headache														100%						
Fainting														100%						
Prostration														100%						
Death														100%						
Severity Scale mild to moderate moderate to severe unspecified or mild moderate severe Colors used to improve visualization only.																				
Management and Treatment Performance: ◦ DT:PD from 6 to 20 minutes; PD from 20 to 90 minutes; CI from 90 minutes to death. ◦ UT:PD from 30 minutes to 3 hours; CI from 3 hours to death. Hospitalization Percentage/Duration ◦ At 6 hours to 1-2 days medical care for 100%; 100% deaths at 2 to 4 days. ◦ Symptomatic medical care will be required within the first hour. Therapy ◦ Supportive treatment.																				
(a) Granulocyte count drops to zero. (b) Lymphocyte count drops to zero. CI = Combat Ineffective (less than 25% performance) PD = Performance Degraded (25-75% performance) DT = Demanding Task UT = Undemanding Task																				

Adapted from NATO Handbook on the Medical Aspects of NBC Defensive Operations AMedP-6(B), Chapter 6, General Medical Effects of Nuclear Weapons: Diagnosis, Treatment, and Prognosis, 1 February, 1996.